

Datasheet for ABIN3085076
NUDT3 Protein (AA 1-172) (Strep Tag)



[Go to Product page](#)

Overview

Quantity:	1 mg
Target:	NUDT3
Protein Characteristics:	AA 1-172
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This NUDT3 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MMKLKSNQTR TYDGDGYKKR AACLCFRSES EEEVLLVSSS RHPDRWIVPG GGMEPEEEPS
VAAVREVCEE AGVKGTLGRL VGIFENQERK HRTYVYVLIV TEVLEDWEDS VNIGRKREWF
KIEDAIKVLQ YHKPVQASYF ETLRQGYSAN NGTPVVATTY SVSAQSSMSG IR

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Characteristics: Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).
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Purity:	> 80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
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Target Details

Target:	NUDT3
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Alternative Name:	NUDT3 (NUDT3 Products)
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Background:	Diphosphoinositol polyphosphate phosphohydrolase 1 (DIPP-1) (EC 3.6.1.52) (Diadenosine hexaphosphate hydrolase) (Ap6A hydrolase) (EC 3.6.1.61) (Endopolyphosphatase) (EC 3.6.1.10) (Nucleoside diphosphate-linked moiety X motif 3) (Nudix motif 3) (m7GpppN-mRNA hydrolase) (EC 3.6.1.62) (m7GpppX diphosphatase) (EC 3.6.1.59),FUNCTION: Cleaves a beta-phosphate
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Target Details

from the diphosphate groups in PP-InsP5 (diphosphoinositol pentakisphosphate) and [PP]2-InsP4 (bisdiphosphoinositol tetrakisphosphate), suggesting that it may play a role in signal transduction (PubMed:12370170, PubMed:9822604, PubMed:10585413). InsP6 (inositol hexakisphosphate) is not a substrate (PubMed:9822604). Acts as a negative regulator of the ERK1/2 pathway (By similarity). Also able to catalyze the hydrolysis of dinucleoside oligophosphates, with diadenosine 5',5'''-P1,P6-hexaphosphate (Ap6A) and diadenosine 5',5'''-P1,P5-pentaphosphate (Ap5A) being the preferred substrates (PubMed:12370170, PubMed:10419486). The major reaction products are ADP and p4a from Ap6A and ADP and ATP from Ap5A (PubMed:12370170). Also able to hydrolyze 5-phosphoribose 1-diphosphate (PubMed:12370170). Acts as a decapping enzyme that modulates the stability of a subset of mRNAs implicated in cell motility (PubMed:26932476). Hydrolyzes monomethylated capped RNA after both the alpha- and beta-phosphates generating m7GMP + ppRNA and m7GDP + pRNA (PubMed:32727897). Can hydrolyze unmethylated capped RNAs (By similarity). Divalent cations zinc, magnesium and manganese determine its substrate specificity (PubMed:34788624). Exhibits diphosphoinositol polyphosphate phosphohydrolase in the presence of magnesium ions, diadenosine hexaphosphate hydrolase activity in the presence of manganese ions and endopolyphosphatase activity in the presence of zinc ions (PubMed:34788624). Plays an important role in limiting DNA damage and maintaining cell survival upon oxidative stress via its endopolyphosphatase activity (PubMed:34788624). {ECO:0000250|UniProtKB:Q9JI46, ECO:0000269|PubMed:10419486, ECO:0000269|PubMed:10585413, ECO:0000269|PubMed:12370170, ECO:0000269|PubMed:34788624, ECO:0000269|PubMed:9822604, ECO:0000305|PubMed:26932476}.

Molecular Weight: 19.5 kDa

UniProt: [O95989](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

Application Details

During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)